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# COMMERCIAL FERTILIZERS

## CONSUMPTION BY CLASS FOR YEAR ENDED JUNE 30, 1978



Crop  
Reporting  
Board

Economics, Statistics, &  
Cooperatives Service

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For information call: (202) 447-7687

CONSUMPTION OF COMMERCIAL FERTILIZER BY CLASS  
1977-1978

FERTILIZER CONSUMPTION DOWN 7 PERCENT

Consumption of fertilizer containing one or more primary nutrients was 45.7 million tons in the United States and Puerto Rico during the year ended June 30, 1978, a decrease of 7 percent from the 49.1 million tons consumed during the 1977 fertilizer year. The total tonnage consisted of 51 percent dry bulk fertilizer, 33 percent fluid and 16 percent dry bagged fertilizer. The breakdown for the previous year was 51 percent dry bulk, 32 percent fluid and 17 percent dry bagged.

Fertilizer consumption represents all commercial fertilizer tonnage sold or shipped for farm and non-farm use as fertilizer. Materials used in the manufacture of registered mixes or for uses other than fertilizer are not included.

FLUID FERTILIZER USAGE DECREASES 5 PERCENT

Fluid fertilizer (liquid, gases, and suspensions) totaled 15.0 million tons, a decrease of 5 percent from the previous year. Consumption of fluid mixtures containing two or more primary nutrients decreased 1 percent to 4.0 million tons, and represents 18 percent of total mixed fertilizer. The average analysis of fluid mixes was 8.9 percent nitrogen, 16.1 percent phosphate, and 9.5 percent potash. The analysis for the preceding year was 8.9-15.3-9.6.

Fluid direct-application materials at 11.0 million tons decreased 6 percent and accounted for 47 percent of all direct-application materials tonnage. Fluid materials include anhydrous ammonia, aqua ammonia, nitrogen, phosphoric and potassic solutions and other miscellaneous primary nutrient materials applied directly to the soil in fluid form. The average nutrient content of fluid materials consumed in the 1978 fertilizer year was 51.1 percent nitrogen, 0.2 percent phosphate and less than 0.1 percent potash compared with 50.8-0.2-0.1 the previous year.

BULK FERTILIZER USAGE DECREASES 5 PERCENT

Dry bulk fertilizer mixtures and dry bulk direct-application materials used totaled 23.2 million tons for the 1977-78 fertilizer year, down 8 percent from the previous year. Mixed fertilizer in the dry bulk form at 12.4 million tons was down 10 percent and accounted for 56 percent of the total primary nutrient mixtures. Direct-application materials in the dry bulk form decreased 5 percent to 10.8 million tons and comprised 46 percent of all direct-application materials.

DRY BAGGED FERTILIZER CONTINUES TO DECREASE

During the 1977-78 fertilizer year dry bagged fertilizer tonnage decreased 9 percent, but accounted for 16 percent of total consumption. Mixed fertilizers in bags totaled 5.7 million tons, down 10 percent. This accounted for 26 percent of all mixed fertilizer. Direct-application materials in bags at 1.8 million tons declined 6 percent and accounted for 8 percent of all primary nutrient direct-application materials.

DATA SOURCES

This report, compiled by the Crop Reporting Board of the Economics, Statistics, and Cooperatives Service, is based on fertilizer tonnage reports prepared by State Fertilizer Control Officials and the voluntary response of more than 1500 fertilizer manufacturers, blenders, and sales outlets.

TABLE 1. FERTILIZER CONSUMPTION BY CLASS 1/  
1967-78

YEAR ENDED JUNE 30:	MIXTURES			MATERIALS			TOTAL CONSUMPTION 2/			
	DRY BAGGED	DRY BULK	FLUID	DRY BAGGED	DRY BULK	FLUID	DRY BAGGED	DRY BULK	FLUID	TOTAL
	1,000 TONS									
1967	12,088.4	7,145.2	1,828.0	3,400.8	5,014.2	5,848.1	15,489.2	12,159.4	7,676.1	35,325.0
1968	10,827.6	8,214.1	1,988.9	3,072.5	6,099.3	6,567.7	13,900.1	14,313.4	8,556.6	36,769.9
1969	9,934.9	8,798.9	2,249.1	3,208.9	6,399.6	6,687.6	13,143.8	15,198.5	8,936.7	37,279.0
1970	9,202.6	8,974.3	2,540.5	2,943.6	6,848.1	7,436.7	12,146.3	15,822.4	9,977.2	37,945.7
1971	8,680.1	9,663.3	2,937.7	2,819.9	7,268.4	8,194.1	11,500.0	16,931.7	11,131.8	39,563.0
1972	8,476.1	9,779.9	3,040.0	2,765.9	7,683.8	7,799.7	11,242.0	17,463.7	10,839.7	39,545.3
1973 3/	7,937.0	11,416.3	3,194.2	2,607.7	8,737.4	7,929.9	10,544.8	20,153.6	11,124.0	41,822.4
1974 3/	8,063.2	12,547.7	3,456.5	2,419.2	9,289.0	9,188.8	10,482.4	21,836.7	12,645.3	44,964.4
1975 3/	6,917.8	10,561.2	3,168.4	2,126.3	8,811.4	9,020.9	9,044.1	19,372.6	21,189.3	40,605.9
1976 3/	6,613.8	12,709.6	3,635.3	1,914.7	10,700.1	11,293.0	8,555.8	23,409.6	14,927.8	46,893.0
1977 3/	6,369.5	13,728.7	4,001.2	1,894.6	11,425.4	11,679.3	8,264.1	25,154.0	15,680.4	49,098.6
1978 3/	5,727.3	12,417.5	3,976.5	1,774.1	10,817.5	10,997.3	7,501.4	23,235.0	14,973.8	45,710.2

1/ EXCLUDES SECONDARY AND MICRONUTRIENT MATERIALS.

2/ SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

3/ INCLUDES TONNAGES FOR ALAS, HAW AND P R.

TABLE 2. FLUID FERTILIZERS AVERAGE PRIMARY NUTRIENT CONTENT  
1967-1978

YEAR ENDED JUNE 30:	FLUID MIXTURES				FLUID MATERIALS			
	N	AVAILABLE P2O5	K <sub>2</sub> O	TOTAL	N	AVAILABLE P2O5	K <sub>2</sub> O	TOTAL
	PERCENT							
1967	7.5	16.2	6.1	29.8	50.1	0.5	0	50.6
1968	7.1	16.0	7.0	30.1	52.6	0.1	0	52.7
1969	7.8	16.3	7.1	31.2	53.1	0.7	0	53.8
1970	8.4	16.4	7.6	32.4	53.2	0.5	0	53.7
1971	8.1	15.9	8.3	32.0	54.1	0.4	0	54.5
1972	8.5	16.1	8.4	33.0	53.0	0.4	0	53.4
1973 1/	8.7	15.6	8.5	32.8	51.2	0.4	0	51.6
1974 1/	8.6	14.7	9.2	32.5	52.6	0.2	0	52.8
1975 1/	8.6	14.8	8.9	32.3	51.7	0.2	0.1	52.0
1976 1/	9.1	15.5	9.4	34.0	50.9	0.2	0.1	51.2
1977 1/	8.9	15.3	9.6	33.8	50.8	0.2	0.1	51.1
1978 1/	8.9	16.1	9.5	34.5	51.1	0.2	0	51.3

1/ INCLUDES ALAS, HAW AND P R.

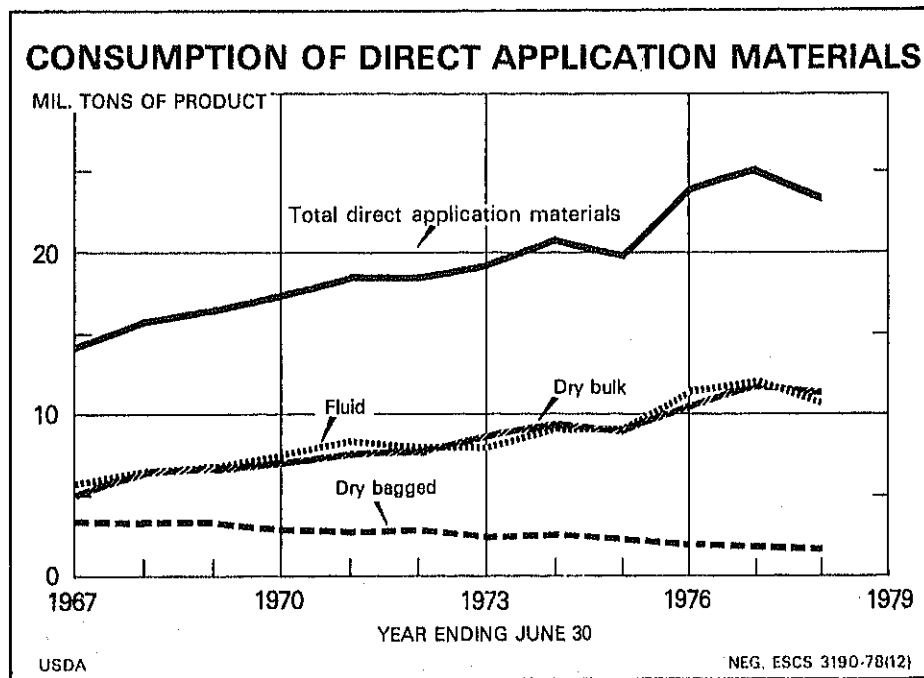
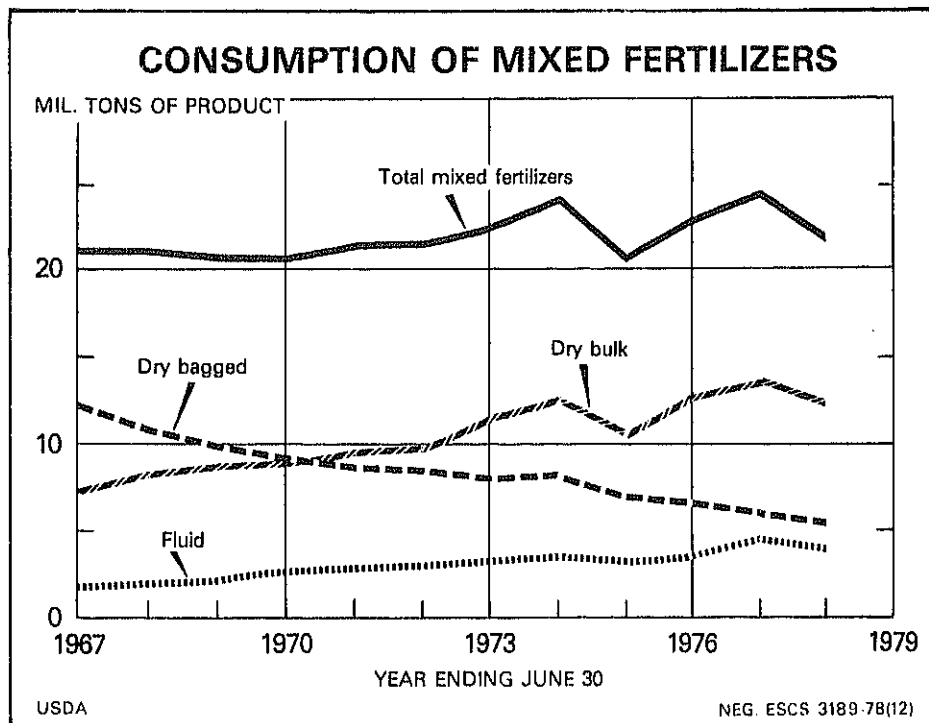


TABLE 3. MIXED FERTILIZER CONSUMPTION BY CLASS YEAR ENDED JUNE 30, 1977

STATE	MIXTURES				PERCENT OF TOTAL MIXTURES		
	DRY : BAGGED :	DRY : BULK :	FLUID :	TOTAL 1/ :	DRY : BAGGED :	DRY : BULK :	FLUID :
	1,000 TONS				PERCENT		
ALA	255.5	400.9	73.0	729.4	35	55	10
ALAS	6.8	.8	0	7.6	90	10	0
ARIZ	5.9	23.5	24.3	53.7	11	44	45
ARK	52.4	335.6	43.4	431.4	12	78	10
CALIF	130.9	267.2	253.7	651.8	20	41	39
COLO	16.7	68.3	21.0	106.0	16	64	20
CONN	36.7	4.5	4.6	45.8	80	10	10
DEL	23.9	64.4	3.7	92.1	26	70	4
D C	5.9	.4	.3	6.6	90	6	4
FLA	372.9	1,138.5	98.2	1,609.6	23	71	6
GA	289.5	969.7	262.0	1,521.2	19	64	17
HAW	30.4	45.6	42.8	118.8	26	38	36
IDAHO	6.8	76.8	10.6	94.3	7	82	11
ILL	125.0	901.8	501.0	1,527.7	8	59	33
IND	299.5	906.6	280.3	1,486.4	20	61	19
IOWA	114.2	640.5	399.8	1,154.5	10	55	35
KANS	111.8	270.8	92.0	474.6	24	57	19
KY	321.0	274.1	39.0	634.1	51	43	6
LA	92.2	262.5	67.6	422.4	22	62	16
MAINE	19.2	93.6	1.1	113.9	17	82	1
MD	133.7	190.1	24.4	348.2	38	55	7
MASS	46.3	3.5	3.3	53.1	87	7	6
MICH	248.5	388.7	45.3	682.4	36	57	7
MINN	99.2	520.9	124.8	744.9	13	70	17
MISS	193.6	283.1	6.7	483.3	40	59	1
MO	136.1	1,031.8	150.4	1,318.3	10	79	11
MONT	6.4	128.2	9.4	143.9	4	89	7
NEBR	30.4	245.6	158.1	434.0	7	57	36
NEV	1.3	1.5	1.5	4.4	31	34	35
N H	14.3	2.0	.4	16.6	86	12	2
N J	107.4	71.2	5.0	183.6	58	39	3
N MEX	13.8	16.4	4.1	34.3	40	48	12
N Y	247.0	178.9	32.1	457.9	54	39	7
N C	849.5	363.4	168.4	1,381.3	62	26	12
N DAK	17.8	269.0	28.9	315.7	6	85	9
OHIO	261.9	590.9	200.7	1,053.5	25	56	19
OKLA	77.7	222.9	14.0	314.6	25	71	4
OREG	20.9	61.8	5.3	87.9	24	70	6
PA	314.0	154.9	20.0	488.9	64	32	4
R I	9.6	3.7	1.5	14.8	65	25	10
S C	212.3	394.3	58.7	665.3	32	59	9
S DAK	10.2	99.0	24.6	133.8	8	74	18
TENN	257.9	226.1	14.0	498.0	52	45	3
TEX	210.3	809.9	452.0	1,472.3	14	55	31
TAH	1.1	9.2	.9	11.2	10	82	8
T	23.6	17.1	4.0	44.8	53	38	9
A	232.3	264.2	146.8	643.3	36	41	23
ASH	16.6	111.4	19.1	147.1	11	76	13
VA	35.5	10.0	.6	46.1	77	22	1
WIS	123.8	284.0	55.8	463.6	27	61	12
WYO	.9	18.2	2.3	21.4	4	85	11
P R	98.2	10.9	0	109.1	90	10	0
U S	6,369.5	13,728.7	4,001.2	24,099.4	26	57	17

1/ SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

TABLE 4. MIXED FERTILIZER CONSUMPTION BY CLASS YEAR ENDED JUNE 30, 1978

STATE	MIXTURES				PERCENT OF TOTAL MIXTURES		
	DRY	DRY	FLUID	TOTAL 1/	DRY	DRY	FLUID
	BAGGED	BULK			BAGGED	BULK	
	1,000 TONS				PERCENT		
ALA	192.4	419.2	75.6	687.2	28	61	11
ALAS	3.8	.4	0	4.2	90	10	0
ARIZ	5.3	20.3	22.7	48.3	11	42	47
ARK	44.2	295.0	29.5	368.7	12	80	8
CALIF	165.5	317.7	178.7	661.9	25	48	27
COLO	3.2	81.8	21.3	106.3	3	77	20
CONN	27.1	5.8	5.8	38.8	70	15	15
DEL	17.8	44.4	6.2	68.4	26	65	9
D C	5.4	.4	.3	6.1	89	6	5
FLA	329.7	1,203.4	115.4	1,648.5	20	73	7
GA	246.1	803.0	246.1	1,295.2	19	62	19
HAW	38.8	36.1	58.9	133.8	29	27	44
IDAHO	5.9	81.0	11.8	98.7	6	82	12
ILL	100.5	741.4	414.7	1,256.5	8	59	33
IND	325.0	650.0	438.0	1,413.0	23	46	31
IOWA	90.2	642.8	394.7	1,127.8	8	57	35
KANS	83.6	212.8	83.6	380.0	22	56	22
KY	263.6	242.1	32.3	538.0	49	45	6
LA	78.4	256.9	100.2	435.5	18	59	23
MAINE	18.7	84.1	1.0	103.9	18	81	1
MD	75.6	189.0	26.2	290.8	26	65	9
MASS	60.0	7.9	3.6	71.5	84	11	5
MICH	291.3	345.5	40.6	677.4	43	51	6
MINN	82.4	487.3	116.7	686.3	12	71	17
MISS	153.3	264.0	8.5	425.7	36	62	2
MO	111.6	881.7	122.8	1,116.1	10	79	11
MONT	2.4	110.9	6.0	119.3	2	93	5
NEBR	31.0	201.3	154.8	387.1	8	52	40
NEV	1.1	1.8	1.6	4.5	25	40	35
N H	15.5	3.3	.6	19.4	80	17	3
N J	76.1	73.0	3.0	152.1	50	48	2
N MEX	13.1	16.4	3.3	32.7	40	50	10
N Y	180.5	225.6	45.1	451.3	40	50	10
N C	745.9	372.9	167.2	1,286.0	58	29	13
N DAK	16.3	226.0	30.0	272.3	6	83	11
OHIO	269.5	500.6	192.5	962.7	28	52	20
OKLA	59.4	171.1	7.1	237.6	25	72	3
OREG	21.3	43.4	11.4	76.2	28	57	15
PA	323.3	135.1	24.1	482.6	67	28	5
R I	5.4	2.6	1.4	9.4	57	28	15
S C	189.7	327.6	57.5	574.8	33	57	10
S DAK	10.5	112.4	27.0	149.9	7	75	18
TENN	238.4	193.4	18.0	449.9	53	43	4
TEX	209.7	726.9	461.3	1,397.9	15	52	33
UTAH	.8	8.8	.8	10.5	8	84	8
VT	25.1	7.6	3.6	36.3	69	21	10
VA	202.4	242.9	133.0	578.3	35	42	23
WASH	19.0	83.6	24.1	126.7	15	66	19
W VA	29.5	8.4	.4	38.3	77	22	1
WIS	129.9	287.5	46.4	463.8	28	62	10
WYO	.7	10.0	1.2	11.9	6	84	10
P R	91.5	10.2		101.6	90	10	
U S	5,727.3	12,417.5	3,976.5	22,121.3	26	56	18

1/ SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.



TABLE 5. DIRECT-APPLICATION MATERIALS CONSUMPTION BY CLASS  
YEAR ENDED JUNE 30, 1977 <sup>1/</sup>

STATE :	MATERIALS :				PERCENT OF TOTAL MATERIALS :		
	DRY :	DRY :	FLUID :	TOTAL <sup>2/</sup> :	DRY :	DRY :	FLUID :
	BAGGED :	BULK :			BAGGED :	BULK :	
	1,000 TONS				PERCENT		
ALA :	136.0	180.5	113.1	429.5	32	42	26
ALAS :	.2	2.0	0	2.2	10	90	0
ARIZ :	24.6	98.4	156.8	279.8	9	35	56
ARK :	35.2	270.5	49.0	354.7	10	76	14
CALIF :	191.8	767.1	1,011.5	1,970.3	10	39	51
COLO :	8.7	111.2	117.3	237.2	4	47	49
CONN :	13.5	3.4	.9	17.7	76	19	5
DEL :	4.5	16.9	28.3	49.7	9	34	57
D C :	.8	.1	.1	1.0	80	15	5
FLA :	89.4	151.8	120.9	362.1	25	42	33
GA :	120.7	166.7	576.0	863.4	14	19	67
HAW :	15.2	35.5	15.0	65.7	23	54	23
IDAHO :	8.9	287.1	118.0	414.0	2	69	29
ILL :	12.2	1,553.7	1,239.6	2,805.5	1	55	44
IND :	21.8	582.5	816.4	1,420.7	2	41	57
IOWA :	15.1	1,026.2	997.9	2,039.3	1	50	49
KANS :	57.0	322.9	766.6	1,146.4	5	28	67
KY :	80.8	298.2	118.1	497.1	16	60	24
LA :	24.3	137.9	83.3	245.5	10	56	34
MAINE :	7.2	3.1	0	10.3	70	30	0
MD :	13.4	69.3	74.5	157.2	9	44	47
MASS :	10.4	3.9	.6	14.9	70	26	4
MICH :	116.0	189.2	200.6	505.8	23	37	40
MINN :	39.0	741.1	517.7	1,297.8	3	57	40
MISS :	157.8	161.0	101.4	420.1	38	38	24
MO :	17.8	180.5	271.0	469.2	4	38	58
MONT :	5.4	130.4	12.3	148.1	4	88	8
NEBR :	24.9	389.9	1,011.2	1,426.0	2	27	71
NEV :	3.2	9.0	5.8	18.0	18	50	32
N H :	3.0	.3	1.1	4.4	67	7	26
N J :	11.7	7.8	6.1	25.7	46	30	24
N MEX :	22.2	12.8	36.7	71.7	31	18	51
N Y :	40.9	50.0	53.3	144.2	28	35	37
N C :	147.4	59.1	415.7	622.1	24	9	67
N DAK :	3.4	168.3	179.6	351.3	1	48	51
OHIO :	26.8	546.8	419.8	993.3	3	55	42
OKLA :	13.1	237.4	208.7	459.3	3	52	45
OREG :	40.1	294.1	112.4	446.7	9	66	25
PA :	21.2	123.2	49.0	193.4	11	64	25
R I :	3.5	.6	0	4.1	85	15	0
S C :	53.1	33.9	227.5	314.4	17	11	72
S DAK :	1.9	124.1	80.7	206.7	1	60	39
TENN :	75.8	215.8	68.5	360.2	21	60	19
TEX :	68.5	584.3	598.0	1,250.8	5	47	48
UTAH :	5.7	102.9	5.7	114.3	5	90	5
VT :	5.8	5.4	1.6	12.8	45	42	13
VA :	35.0	31.3	175.3	241.6	14	13	73
WASH :	25.8	232.4	279.3	537.6	5	43	52
W VA :	7.9	16.1	6.2	30.2	26	53	21
WIS :	22.5	653.0	204.3	879.8	3	74	23
WYO :	.5	34.8	19.0	54.3	1	64	35
P R :	3.1	1.0	6.9	11.0	28	9	63
U S :	1,894.6	11,425.4	11,679.3	24,999.2	7	46	47

<sup>1/</sup> EXCLUDES SECONDARY AND MICRONUTRIENT MATERIALS.

<sup>2/</sup> SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

TABLE 6. DIRECT-APPLICATION MATERIALS CONSUMPTION BY CLASS  
YEAR ENDED JUNE 30, 1978 <sup>1/</sup>

STATE	MATERIALS				PERCENT OF TOTAL MATERIALS		
	DRY BAGGED	DRY BULK	FLUID	TOTAL <sup>2/</sup>	DRY BAGGED	DRY BULK	FLUID
	1,000 TONS				PERCENT		
ALA	80.1	171.1	112.8	364.0	22	47	31
ALAS	.1	1.1	0	1.2	10	90	0
ARIZ	18.7	97.9	116.6	233.2	8	42	50
ARK	21.8	215.6	35.5	272.9	8	79	13
CALIF	233.3	641.6	1,069.3	1,944.1	12	33	55
COLO	11.5	147.1	129.8	288.5	4	51	45
CONN	13.9	6.1	1.1	21.1	66	29	5
DEL	3.8	10.5	27.6	41.8	9	25	66
D C	.6	.1	.1	.8	80	15	5
FLA	47.8	164.3	86.6	298.7	16	55	29
GA	92.4	156.4	462.0	710.7	13	22	65
HAW	13.3	31.7	12.7	57.7	23	55	22
IDAHO	24.1	313.4	144.6	482.1	5	65	30
ILL	23.7	1,159.1	1,182.8	2,365.5	1	49	50
IND	41.3	565.1	771.8	1,378.2	3	41	56
IOWA	21.2	1,017.6	1,081.2	2,120.0	1	48	51
KANS	40.5	333.7	637.1	1,011.3	4	33	63
KY	62.6	290.5	93.9	447.0	14	65	21
LA	21.8	109.1	87.2	218.1	10	50	40
MAINE	7.8	1.5	0	9.3	84	16	0
MD	11.1	43.1	69.0	123.2	9	35	56
MASS	7.3	7.3	.3	15.0	49	49	2
MICH	152.0	195.5	195.5	543.0	28	36	36
MINN	63.3	708.8	493.6	1,265.7	5	56	39
MISS	113.3	149.9	102.4	365.6	31	41	28
MO	16.5	128.3	184.2	329.0	5	39	56
MONT	6.2	104.8	12.3	123.3	5	85	10
NEBR	28.0	392.0	980.0	1,399.9	2	28	70
NEV	4.1	9.0	7.4	20.5	20	44	36
N H	2.9	.5	1.4	4.8	60	11	29
N J	15.9	10.1	2.9	28.9	55	35	10
N MEX	22.9	16.0	37.3	76.2	30	21	49
N Y	36.0	45.7	56.8	138.4	26	33	41
N C	108.6	98.2	310.2	516.9	21	19	60
N DAK	14.9	152.7	204.8	372.3	4	41	55
OHIO	30.2	573.1	402.2	1,005.5	3	57	40
OKLA	18.1	234.8	198.7	451.5	4	52	44
OREG	24.9	261.9	128.9	415.7	6	63	31
PA	25.4	116.1	39.9	181.4	14	64	22
R I	2.9	1.4	0	4.3	68	32	0
S C	44.7	39.4	178.8	262.9	17	15	68
S DAK	2.2	149.8	68.3	220.3	1	68	31
TENN	72.8	215.1	59.0	346.9	21	62	17
TEX	45.0	596.5	484.0	1,125.5	4	53	43
UTAH	4.0	89.5	6.0	99.4	4	90	6
VT	4.6	3.8	1.3	9.6	48	39	13
VA	30.4	36.1	123.5	190.0	16	19	65
WASH	44.6	235.6	356.6	636.9	7	37	56
W VA	8.1	13.8	5.2	27.2	30	51	19
WIS	28.9	721.9	211.8	962.5	3	75	22
WYO	1.6	32.6	19.2	53.5	3	61	36
P R	2.5	.7	3.4	6.6	38	10	52
U S	1,774.1	10,817.5	10,997.3	23,589.0	7	46	47

<sup>1/</sup> EXCLUDES SECONDARY AND MICRONUTRIENT MATERIALS.

<sup>2/</sup> SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

TABLE 7. CONSUMPTION OF FERTILIZER MIXTURES AND DIRECT-APPLICATION MATERIALS  
BY CLASS, YEAR ENDED JUNE 30, 1977 <sup>1/</sup>

STATE	MIXTURES AND MATERIALS				PERCENT OF TOTAL FERTILIZER		
	DRY BAGGED	DRY BULK	FLUID	TOTAL <sup>2/</sup>	DRY BAGGED	DRY BULK	FLUID
	1,000 TONS				PERCENT		
ALA	391.5	581.3	186.1	1,158.9	34	50	16
ALAS	7.1	2.7	0	9.8	72	28	0
ARIZ	30.5	121.9	181.2	333.5	9	37	54
ARK	87.6	606.1	92.3	786.1	11	77	12
CALIF	322.6	1,034.3	1,265.1	2,622.1	12	40	48
COLO	25.4	179.5	138.3	343.2	8	52	40
CONN	50.2	7.9	5.4	63.5	79	12	9
DEL	28.4	81.3	32.1	141.8	19	57	24
D C	6.7	.5	.3	7.6	89	7	4
FLA	462.4	1,290.3	219.0	1,971.7	24	65	11
GA	410.2	1,136.4	838.0	2,384.5	17	48	35
HAW	45.6	81.2	57.7	184.5	25	44	31
IDAHO	15.7	363.9	128.7	508.3	3	72	25
ILL	137.2	2,455.5	1,740.5	4,333.2	3	57	40
IND	321.2	1,489.2	1,096.7	2,907.1	11	51	38
IOWA	129.3	1,666.7	1,397.7	3,193.7	4	52	44
KANS	168.8	593.7	858.5	1,621.0	10	37	53
KY	401.8	572.3	157.1	1,131.2	35	51	14
LA	116.6	400.4	150.9	667.9	17	60	23
MAINE	26.3	96.6	1.1	124.1	21	78	1
MD	147.2	259.4	98.8	505.4	29	51	20
MASS	56.7	7.4	3.9	68.0	83	11	6
MICH	364.5	577.9	245.9	1,188.2	31	48	21
MINN	138.2	1,261.9	642.6	2,042.7	7	62	31
MISS	351.3	444.1	108.1	903.5	39	49	12
MO	153.9	1,212.3	421.3	1,787.5	9	68	23
MONT	11.8	258.6	21.7	292.1	4	89	7
NEBR	55.2	635.5	1,169.2	1,860.0	3	34	63
NEV	4.5	10.5	7.4	22.3	20	47	33
N H	17.3	2.3	1.5	21.0	82	11	7
N J	119.1	79.0	11.2	209.3	57	38	5
N MEX	36.0	29.2	40.8	106.0	34	28	38
N Y	287.9	228.9	85.3	602.1	48	38	14
N C	996.9	422.5	584.1	2,003.5	50	21	29
N DAK	21.2	437.3	208.5	667.0	3	66	31
OHIO	288.7	1,137.7	620.5	2,046.8	14	56	30
OKLA	90.8	460.3	222.7	773.9	12	59	29
OREG	61.0	355.9	117.7	534.6	11	67	22
PA	335.2	278.1	69.0	682.3	49	41	10
R I	13.1	4.3	1.5	18.9	69	23	8
S C	265.3	428.2	286.2	979.7	27	44	29
S DAK	12.1	223.1	105.3	340.5	4	65	31
TENN	333.7	441.9	82.5	858.1	39	51	10
TEX	278.8	1,394.2	1,050.0	2,723.1	10	51	39
UTAH	6.8	112.1	6.6	125.5	5	90	5
'T	29.4	22.5	5.7	57.6	51	39	10
A	267.3	295.5	322.1	885.0	30	34	36
ASH	42.5	343.8	298.4	684.7	6	50	44
VA	43.5	26.1	6.8	76.4	57	34	9
WIS	146.3	936.9	260.1	1,343.4	11	70	19
WYO	1.4	53.0	21.3	75.7	1	69	30
P R	101.3	11.9	6.9	120.1	84	10	6
U S	8,264.1	25,154.0	15,680.4	49,098.6	17	51	32

<sup>1/</sup> EXCLUDES SECONDARY AND MICRONUTRIENT MATERIALS.

<sup>2/</sup> SUM OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

TABLE 8. CONSUMPTION OF FERTILIZER MIXTURES AND DIRECT-APPLICATION MATERIALS,  
BY CLASS, YEAR ENDED JUNE 30, 1978 <sup>1/</sup>

TE	MIXTURES AND MATERIALS				PERCENT OF TOTAL FERTILIZER		
	DRY BAGGED	DRY BULK	FLUID	TOTAL 2/	DRY BAGGED	DRY BULK	FLUID
	1,000 TONS				PERCENT		
:	272.5	590.5	188.4	1,051.2	26	56	18
:	3.9	1.5	0	5.4	72	28	0
:	24.0	118.2	139.3	281.5	9	42	49
:	66.0	510.6	65.0	641.6	10	80	10
:	398.8	959.3	1,248.0	2,606.0	15	37	48
:	14.7	228.9	151.1	394.8	4	58	38
:	41.0	11.9	6.9	59.9	68	20	12
:	21.6	54.9	33.8	110.2	19	50	31
:	6.0	.5	.4	6.9	87	7	6
:	377.5	1,367.7	202.0	1,947.2	20	70	10
:	338.5	959.4	708.1	2,005.9	17	48	35
:	52.1	67.8	71.6	191.5	27	36	37
:	30.0	394.4	156.4	580.8	5	68	27
:	124.2	1,900.5	1,597.5	3,622.0	3	53	44
:	366.3	1,215.1	1,209.8	2,791.2	13	44	43
:	111.4	1,660.4	1,475.9	3,247.8	3	51	46
:	124.1	546.5	720.7	1,391.3	9	39	52
:	326.2	532.6	126.2	985.0	33	54	13
:	100.2	366.0	187.4	653.6	15	56	29
:	26.5	85.6	1.0	113.2	23	76	1
:	86.7	232.1	95.2	414.0	21	56	23
:	67.3	15.2	3.9	86.5	78	18	4
:	443.3	541.0	236.1	1,220.4	36	44	20
:	145.7	1,196.1	610.3	1,952.0	8	61	31
:	266.6	413.9	110.9	791.3	34	52	14
:	128.1	1,010.0	307.0	1,445.1	9	70	21
:	8.6	215.7	18.3	242.6	4	89	7
:	59.0	593.3	1,134.8	1,787.0	3	33	64
:	5.2	10.8	9.0	25.0	21	43	36
:	18.4	3.8	2.0	24.2	76	16	8
:	92.0	83.1	5.9	181.0	51	46	3
:	36.0	32.4	40.6	108.9	33	30	37
:	216.5	271.3	101.9	589.7	37	46	17
:	854.5	471.1	477.4	1,802.9	47	26	27
:	31.2	378.7	234.8	644.6	5	59	36
:	299.7	1,073.7	594.7	1,968.2	15	55	30
:	77.5	405.9	205.8	689.1	11	59	30
:	46.2	305.3	140.3	491.9	9	62	29
:	348.7	251.2	64.0	664.0	52	38	10
:	8.3	4.0	1.4	13.7	61	29	10
:	234.4	367.0	236.3	837.7	28	44	28
:	12.7	262.2	95.3	370.2	3	71	26
:	311.2	408.5	77.0	796.8	39	51	10
:	254.7	1,323.4	945.3	2,523.4	10	52	38
:	4.8	98.3	6.8	109.9	4	90	6
:	29.7	11.4	4.9	45.9	65	25	10
:	232.8	279.0	256.5	768.3	30	36	34
:	63.6	319.2	380.7	763.6	8	42	50
:	37.6	22.2	5.6	65.5	57	34	9
:	158.8	1,009.4	258.2	1,426.3	11	71	18
:	2.3	42.6	20.4	65.4	4	65	31
:	94.0	10.9	3.4	108.2	87	10	3
:	7,501.4	23,235.0	14,973.8	45,710.2	16	51	33

EXCLUDES SECONDARY AND MICRONUTRIENT MATERIALS.  
OF INDIVIDUAL ITEMS MAY NOT EQUAL TOTAL DUE TO ROUNDING.

TABLE 9. AVERAGE PRIMARY NUTRIENT CONTENT OF FLUID MIXTURES AND  
DIRECT-APPLICATION MATERIALS CONSUMED, YEAR ENDED JUNE 30, 1977

STATE	FLUID MIXTURES				FLUID MATERIALS			
	N	AVAILABLE P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	TOTAL	N	AVAILABLE P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	TOTAL
	PERCENT							
ALA	8.5	17.0	7.6	33.1	43.8	0	0	43.8
ALAS								
ARIZ	10.1	32.7	.3	43.1	45.0	1.6	0	46.6
ARK	12.7	9.8	5.7	28.2	45.8	0	0	45.8
CALIF	9.6	18.0	4.7	32.3	35.1	.9	0	36.0
COLO	9.6	24.1	4.7	38.4	62.4	0	0	62.4
CONN	12.9	7.6	11.0	31.5	31.4	0	0	31.4
DEL	9.0	30.4	1.6	41.0	32.7	0	0	32.7
D C	10.0	6.0	6.0	22.0	39.2	0	0	39.2
FLA	9.6	4.8	12.1	26.5	41.1	1.1	.2	42.4
GA	7.1	9.8	16.3	33.2	35.0	0	0	35.0
HAW	9.2	7.6	9.0	25.8	20.1	0	0	20.1
IDAHO	9.8	32.4	0	42.2	50.4	0	0	50.4
ILL	6.8	14.3	13.1	34.2	56.9	.1	0	57.0
IND	8.2	11.1	14.5	33.8	47.6	0	0	47.6
IOWA	7.1	16.3	15.1	38.5	59.7	0	0	59.7
KANS	9.7	30.4	2.2	42.3	60.5	0	0	60.5
KY	9.0	18.9	11.7	39.6	48.8	.1	.2	49.1
LA	10.2	9.6	9.9	29.7	40.8	.1	3.2	44.1
MAINE	13.1	7.0	10.2	30.3				
MD	6.4	18.8	6.9	32.1	35.4	0	0	35.4
MASS	8.5	9.1	10.0	27.6	33.5	0	0	33.5
MICH	9.1	22.8	5.7	37.6	53.6	0	0	53.6
MINN	8.3	21.1	8.8	38.2	65.4	.2	0	65.6
MISS	12.5	24.7	7.7	44.9	57.2	0	0	57.2
MO	9.7	10.3	11.5	31.5	60.7	0	0	60.7
MONT	10.0	34.0	0	44.0	53.7	4.8	0	58.5
NEBR	9.7	26.9	3.0	39.6	61.5	0	0	61.5
NEV	10.0	34.0	.1	44.1	38.2	0	0	38.2
N H	12.6	6.8	10.1	29.5	41.9	0	0	41.9
N J	8.6	11.6	9.3	29.5	29.8	3.1	0	32.9
N MEX	7.4	22.2	1.8	31.4	58.9	0	0	58.9
N Y	9.0	21.3	7.5	37.8	40.2	0	0	40.2
N C	5.5	8.3	11.2	25.0	30.9	0	0	30.9
N DAK	9.6	32.2	.7	42.5	68.1	0	0	68.1
OHIO	6.8	17.5	9.0	33.3	45.1	.1	0	45.2
OKLA	11.0	26.9	2.4	40.3	67.5	0	0	67.5
OREG	9.8	31.9	.3	42.0	36.8	0	0	36.8
PA	9.1	13.0	8.6	30.7	36.4	.1	.7	37.2
R I	11.9	7.1	10.0	29.0	66.6	0	0	66.6
S C	6.3	7.9	12.9	27.1	28.9	.5	0	29.4
S DAK	9.5	21.5	5.9	36.9	49.9	1.4	0	51.3
TENN	6.0	13.6	19.1	38.7	43.6	0	0	43.6
TEX	15.6	15.4	1.9	32.9	62.1	.2	0	62.3
UTAH	9.9	33.8	.1	43.8	44.5	1.7	0	46.2
VT	12.3	8.6	14.3	35.2	36.1	0	0	36.1
VA	6.5	7.4	11.3	25.2	30.0	0	.2	30.2
WASH	9.8	32.7	.2	42.7	34.8	.3	0	35.1
W VA	6.8	11.4	11.1	29.3	33.7	0	0	33.7
WIS	10.8	17.5	11.1	39.4	50.8	0	.1	50.9
WYO	10.1	33.0	.9	44.0	55.4	.1	0	55.5
P R					31.9	0	0	31.9
U S	8.9	15.3	9.6	33.8	50.8	.2	.1	51.1

TABLE 10. AVERAGE PRIMARY NUTRIENT CONTENT OF FLUID MIXTURES AND  
DIRECT-APPLICATION MATERIALS CONSUMED, YEAR ENDED JUNE 30, 1978

STATE	FLUID MIXTURES				FLUID MATERIALS			
	N	AVAILABLE P2O5	K <sub>2</sub> O	TOTAL	N	AVAILABLE P2O5	K <sub>2</sub> O	TOTAL
	PERCENT							
ALA	6.7	16.9	4.5	28.1	43.0	0	0	43.0
ALAS								
ARIZ	10.0	33.7	0	43.7	43.1	0	0	43.1
ARK	8.5	8.4	8.6	25.5	44.1	1.0	0	45.1
CALIF	9.9	17.8	4.9	32.6	47.9	0	0	47.9
COLO	10.0	29.9	1.5	41.4	32.4	1.2	.2	33.8
CONN	9.4	13.3	12.3	35.0	54.7	.4	0	55.1
DEL	10.1	10.7	9.5	30.3	28.5	0	0	28.5
D C	10.0	7.5	7.0	24.5	39.0	0	0	39.0
FLA	9.9	5.1	12.0	27.0	33.7	2.1	.2	36.0
GA	7.1	9.9	16.2	33.2	34.8	0	0	34.8
HAW	9.5	7.9	9.2	26.6	20.5	0	0	20.5
IDAHO	10.0	33.0	0	43.0	46.6	4.0	0	50.6
ILL	6.9	14.3	14.4	35.6	54.4	0	0	54.4
IND	8.5	17.7	10.5	36.7	44.6	0	0	44.6
IOWA	6.6	17.2	16.0	39.8	58.7	.2	0	58.9
KANS	9.4	29.4	2.3	41.1	59.1	0	0	59.1
KY	9.4	19.8	11.8	41.0	53.4	0	.3	53.7
LA	8.3	10.6	12.1	31.0	43.7	.7	2.7	47.1
MAINE	14.0	11.0	7.0	32.0				
MD	5.6	15.2	8.4	29.2	35.5	0	0	35.5
MASS	11.8	8.5	9.8	30.1	27.6	0	5.7	33.3
MICH	8.0	22.8	6.2	37.0	54.3	0	0	54.3
MINN	8.9	22.8	4.8	36.5	66.6	.4	0	67.0
MISS	7.5	22.5	12.8	42.8	59.7	0	0	59.7
MO	9.9	10.8	12.2	32.9	54.6	0	0	54.6
MONT	10.0	30.0	0	40.0	44.5	1.9	0	46.4
NEBR	9.8	32.0	3.0	44.8	61.2	0	0	61.2
NEV	10.0	34.0	0	44.0	35.1	0	0	35.1
N H	14.3	12.2	9.8	36.3	0	0	0	0
N J	9.0	10.2	9.9	29.1	32.0	0	0	32.0
N MEX	7.9	23.6	.4	31.9	58.0	0	0	58.0
N Y	8.4	23.0	7.9	39.3	40.1	0	0	40.1
N C	5.3	8.1	11.1	24.5	30.7	0	0	30.7
N DAK	9.6	32.6	.6	42.8	71.5	0	0	71.5
OHIO	6.9	17.8	8.9	33.6	44.8	0	.1	44.9
OKLA	9.3	27.2	2.4	38.9	68.1	0	0	68.1
OREG	10.0	34.0	0	44.0	37.6	0	0	37.6
PA	8.6	13.1	9.3	31.0	38.0	.1	.2	38.3
R I	12.0	7.0	10.0	29.0	0	0	0	0
S C	5.7	8.1	14.3	28.1	29.1	1.0	0	30.1
S DAK	10.7	21.5	4.6	36.8	51.1	3.7	0	54.8
TENN	5.6	12.6	20.5	38.7	45.3	0	.1	45.4
TEX	15.7	15.7	1.8	33.2	62.3	.3	0	62.5
UTAH	10.0	33.4	.1	43.5	72.8	0	0	72.8
VT	15.0	10.0	10.0	35.0	36.0	0	0	36.0
VA	7.4	7.0	10.6	25.0	29.8	.3	0	30.1
WASH	9.8	33.1	0	42.9	36.4	.4	0	36.8
W VA	6.9	11.3	11.0	29.2	29.9	0	0	29.9
WIS	9.2	13.7	14.0	36.9	51.2	0	0	51.2
WYO	10.2	34.3	.4	44.9	49.4	0	0	49.4
P R					31.5	0	0	31.5
U S	8.9	16.1	9.5	34.5	51.1	.2	0	51.3

TABLE 11. UNITED STATES CONSUMPTION OF FERTILIZERS AND PLANT NUTRIENTS  
1960-1978

YEAR ENDED JUNE 30	TOTAL CONSUMPTION							
	GROSS TONNAGES				PRIMARY NUTRIENT CONTENT			
	MIXED FERTI- LIZER	PRIMARY NUTRIENT MATERIAL	SECONDARY & MICRO- NUTRIENTS	TOTAL	N	AVAILABLE P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	TOTAL
	1,000 TONS							
1960	15,650	7,850	1,378	24,877	2,738.0	2,572.4	2,153.3	7,463.7
1961	15,735	8,639	1,194	25,567	3,030.8	2,645.1	2,168.5	7,844.4
1962	16,205	9,100	1,310	26,615	3,370.0	2,807.0	2,270.5	8,447.5
1963	17,157	10,229	1,459	28,844	3,929.1	3,072.9	2,503.4	9,505.4
1964	18,093	11,113	1,475	30,681	4,352.8	3,377.8	2,729.7	10,460.3
1965	18,559	11,756	1,521	31,836	4,638.5	3,512.2	2,834.5	10,985.2
1966	19,659	13,412	1,461	34,532	5,326.3	3,897.1	3,221.2	12,444.6
1967	21,132	14,552	1,397	37,081	6,027.1	4,304.7	3,641.8	13,973.6
1968	21,294	15,832	1,617	38,743	6,787.6	4,453.3	3,792.6	15,033.5
1969	21,234	16,380	1,334	38,949	6,957.6	4,665.6	3,891.6	15,514.8
1970	20,961	17,331	1,297	39,589	7,459.0	4,573.8	4,035.5	16,068.3
1971	21,513	18,389	1,216	41,118	8,133.6	4,803.4	4,231.4	17,168.4
1972	21,511	18,385	1,310	41,206	8,022.3	4,863.7	4,326.8	17,212.8
1973	22,547	19,275	1,466	43,288	8,295.1	5,085.2	4,648.7	18,029.0
1974	24,067	20,897	2,130	47,094	9,157.2	5,098.6	5,082.6	19,338.4
1975	20,647	19,959	1,878	42,484	8,600.8	4,506.8	4,453.2	17,560.9
1976	22,958	23,935	2,296	49,189	10,411.6	5,227.6	5,209.7	20,848.8
1977	24,099	24,999	2,525	51,624	10,647.4	5,629.7	5,833.8	22,110.9
1978	22,121	23,589	1,877	47,587	9,973.5	5,099.3	5,526.7	20,599.5

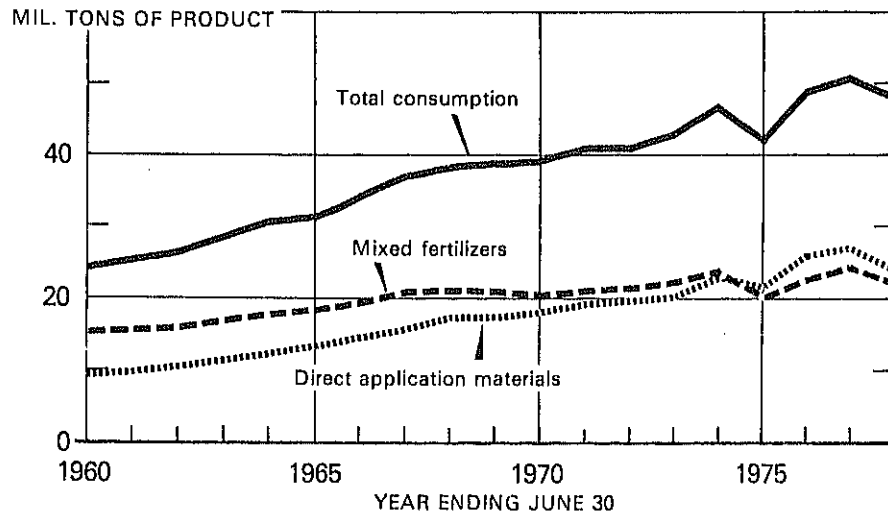
TABLE 12. MIXED FERTILIZERS WITH TWO OR MORE PRIMARY NUTRIENTS, UNITED STATES AND REGIONS,  
YEARS ENDED JUNE 30, 1977 AND 1978 1/ 2/

REGION	1978				
	N-P-K	N-P	N-K	P-K	TOTAL
NEW ENGLAND	268,574	4,317	2,231	4,112	279,234
MIDDLE ATLANTIC	1,333,046	65,054	7,539	83,816	1,489,455
SOUTH ATLANTIC	4,575,990	30,987	346,142	429,588	5,382,707
EAST NORTH CENTRAL	3,123,830	1,251,383	34,235	363,976	4,773,424
WEST NORTH CENTRAL	2,063,626	1,897,088	14,682	144,065	4,119,461
EAST SOUTH CENTRAL	1,691,453	204,081	4,603	200,673	2,100,810
WEST SOUTH CENTRAL	1,709,720	543,578	8,051	178,352	2,439,701
MOUNTAIN	88,462	339,244	1,944	2,508	432,158
PACIFIC	528,978	324,282	8,212	3,225	864,697
ALASKA, HAWAII, PUERTO RICO	142,133	42,436	54,756	278	239,603
UNITED STATES - 1978	15,525,812	4,702,450	482,395	1,410,593	22,121,250
- 1977	17,030,269	5,088,646	488,711	1,491,802	24,099,428

1/ EXCLUDED LIMING MATERIALS AND ALL OTHER MATERIALS USED IN MAKING MIXTURES.

2/ STATES INCLUDED IN EACH REGION ARE: N E (ME, N H, VT, MA, R I, CT); M A (N Y, N J, PA, DE, D C, MD, W V); S A (VA, N C, S C, GA, FL); E N C (OH, IN, IL, MI, WI); W N C (MN, IA, MO, N D, S D, NE, KS); E S C (KY, TN, AL, MS); W S C (AR, LA, OK, TX); MT (MT, ID, WY, CO, N M, AZ, UT, NV); PA (WA, OR, CA).

## CONSUMPTION OF MIXED FERTILIZERS AND DIRECT APPLICATION MATERIALS

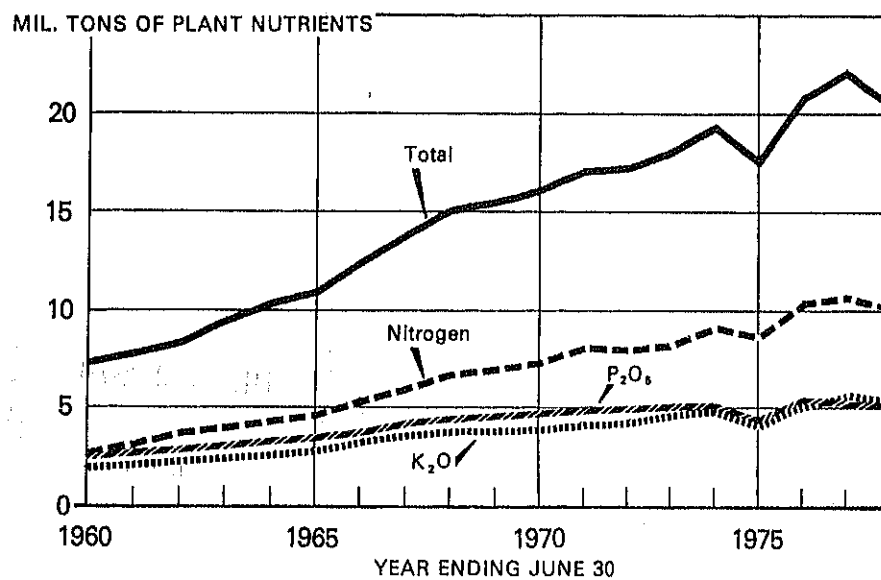


U.S. DEPARTMENT OF AGRICULTURE

NEG. ESCS 75-77 (9)

ESCS

## PLANT NUTRIENT CONSUMPTION



U.S. DEPARTMENT OF AGRICULTURE

NEG. ESCS '6-77 (9)

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